

and 143 had PS-HF. Mean age, prevalence of ischaemic heart disease and arrhythmia were 74±10, 52% and 44%. The maximal follow up was 88 months and the median follow up was 65 months. Amongst 1,380 patients with HF, the 413 with RVSP measurement had a worse prognosis than those who did not (log Rank=0.0001). Patients in the lowest quartile of RVSP (<17.5mmHg) had a similar prognosis to the subgroup of HF patients without TR measurement (16% and 17% at 2 years). Mortality increased as function of the increase in PH (log Rank=0.005). Quartile of RVSP predicted outcome similarly in patients with S-HF and PS-HF. Patients in the highest quartile of RVSP had a 2 year mortality of 38% if S-HF and 35% if PS-HF. On Cox proportional hazards multivariate analysis, COPD, Age, logNTproBNP, mean blood pressure and the highest RVSP quartile were independent predictors of outcome.

Conclusion: Patients with heart failure and a TR velocity indicating even mild pulmonary hypertension have a worse prognosis whether or not LV systolic function is impaired. Patients with more severe PH have an even worse outcome. PH is an independent predictor of outcome in HF.

067

Releasing of unprocessed natriuretic peptides in heart failure

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Both biologically active BNPI-32 and inactive NT-proBNP-76 are released in circulation from prohormone, proBNP-108. Recent data suggest that proBNP is detected in blood of heart failure (HF) patients. Blood levels, kinetics as well as determinants of proBNP-108 secretion are unknown as compared to processed forms. We sought to measure and to compare blood levels of BNP and proBNP in HF and non HF patients.

Methods: plasma natriuretic peptides were assessed in 131 HF patients and in 36 non-HF patients using both Triage BNP assay and BioRad proBNP assay. BioRad assay is highly specific of proBNP when the Triage BNP assay may be influenced by proBNP. Among HF patients, 33 were admitted because of acute HF and blood samples were analyzed on admission and at discharge. In order to compare BNP and proBNP levels, results are expressed as nmole/l.

Results: ProBNP was detected in all patients (104 ± 145 nmol/l) and demonstrated a high degree of correlation with BNP in non-HF patients ($r = 0.95$ [95% IC 0.90 – 0.97], $p < 0.0001$) as well as in HF patients ($r = 0.97$, [0.95 – 0.98], $p < 0.0001$). The proBNP/BNP ratio was higher in HF patients as compared to non-HF patients (0.82 ± 0.23 versus 0.62 ± 0.18 , $p < 0.0001$). In patients with decompensated HF, proBNP/BNP ratio were similar on admission and at discharge, and changes in both BNP and proBNP were similar (0.91, [0.82-0.95], $p < 0.0001$). Interestingly, proBNP/BNP ratio was lower in the most severe HF patients according to discharge BNP and proBNP/BNP ratio was negatively correlated with discharge BNP ($r = -0.40$, [-0.65 – -0.06], $p = 0.02$).

Conclusion: the intact precursor – proBNP- to both BNP and NT-proBNP circulates in both HF and non-HF patients and is an important part of the pool of circulating natriuretic peptides. HF seems to be characterized by a decrease in proBNP processing but, unexpectedly, at a lesser level in acute and/or severe HF as compared with less severe HF. Biological and physiological meanings of our results deserves further studies.

068

Ten-year in-hospital mortality trend for patients hospitalized for heart failure in a single French heart failure clinic

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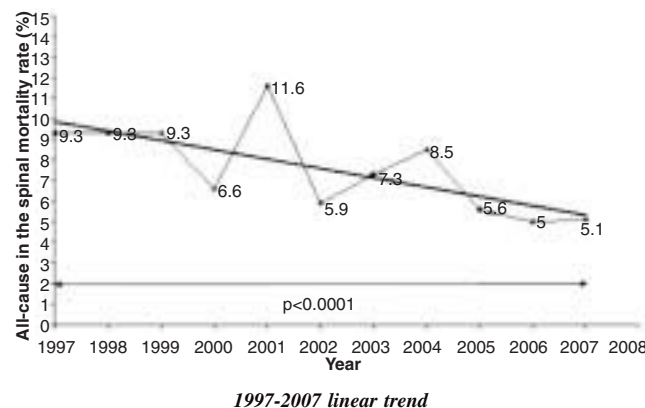
Background: Heart Failure (HF) is a frequent and severe disease. Overall prognosis of systolic HF is poor, and one-year survival rate is lower than most cancers. For that reason, HF units were progressively created in cardiology departments according to the European guidelines.

Aim: The aim of this study was to describe the evolution in all-cause in-hospital mortality in patients hospitalized for HF in the HF clinic created at René Dubos hospital (Pontoise, France).

Methods: We conducted a descriptive study of all-cause in-hospital mortality in a whole population of 4801 patients hospitalized for HF (range per year: 248-640 patients) from January 1997 to December 2007 in our HF clinic. Chi square, test for trend and linear regression were performed.

Results: Our population consisted of 2331 men (48.6%) with a mean age per year ranging from 67.8 to 75.8 years, and a percentage of patients presenting with systolic HF (LVEF<45%) of 53.8%. There were no significant differences in terms of sex, diabetes mellitus or LVEF<45%, except for age and renal insufficiency. All-cause in-hospital mortality rate for patients hospitalized for HF appeared to be significantly decreasing during ten-year follow-up ($p < 0.0001$) (see figure). Moreover we noticed that average length of hospital stay was decreasing during ten-year follow-up ($p = 0.027$, -0.3 day per year).

Conclusion: Mortality in HF patients was confirmed to be decreasing during the last ten-year period, thereby confirming the impact of HF care management on HF prognosis.



069

Main risk factors leading from arterial hypertension to heart failure – The O-PREDICT 2 study

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While the major role played by hypertension (HT) in the genesis of chronic heart failure (HF) is well known, the main risk factors leading to HF in hypertensive patients remain poorly investigated. O-PREDICT 2 was a multicentre, observational study conducted with 1537 general practitioners who recruited 4427 consecutive hypertensive outpatients (pts) (mean age 72±9 years; 66% males). We compared pts with a clinical history of HF (group 1, n=2969) and without HF (group 2, n=1458, age > 65 yrs).

Results: Sex ratio and age were similar between groups. Duration of HT was higher ($P < 0.05$) in group 1 (14 ± 8 vs. 11 ± 8 years in group 2). Blood pressure was lower in group 1, with 49.4% pts having SBP ≥ 140 mmHg vs. 60.9% in group 2. The number of cardiovascular risk factors ranged from 0 to 11 with a median of 4 in group 1, and from 0 to 10 with a median of 2 in group 2; 74.3% of pts in group 1 vs. 45.6% in group 2 had more than 3 risks